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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/137,393	08/20/1998	PIJUSH K. DEWANJEE	DSCK-525-C3	2824

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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

25

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-25

Office Action Summary

Application No.
09/137,393

Applicant(s)
Dewanjee et al.

Examiner
Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 23, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-33, 36-41, and 43-52 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-33, 36-41, and 43-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
**See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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1. The request filed on August 23, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/137,393 is acceptable and a CPA has been established. An action on the CPA follows.
2. Claims 30-33, 36-41, and 43-47 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants have failed to indicate where support exists for the claim language pertaining to the phrases, "finished mold halves", "single molding operation", "formed completely in the same mold in a single molding operation cycle from liquid polyurethane prepolymer reactants within a single mold", and "wherein said liquid polyurethane is poured into a pair of mating finished mold halves".
3. Claims 48-52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants have provided no guidance in selecting suitable reactants based on the claimed post-cure temperature and post-cure time.
4. Claims 30-33, 36-41, and 43-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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It is unclear with respect to what definitive limitation is conveyed by the term, “finished”, when used in conjunction with “golf ball cover”, “polyurethane cover”, or “mold halves”.

Within claim 40, it is unclear what is meant by “liquid polyurethane prepolymer reactants, because the specified reactants are not liquid polyurethane prepolymers.

Lastly, applicants have referred to components being in the liquid state; however, applicants have failed to specify physical conditions, such as temperatures, at which the liquid physical state exists.

5. Claims 30-33, 36-39, and 43-47 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to provide any meaningful description for the terminology, “liquid polyurethane” and “reaction product(s) of a liquid polyurethane”. It is not seen how the liquid polyurethane exists; the polyurethane does not exist until the reactants have yielded the polymer, and applicants have provided no disclosure that the polymer product will be in the form of a liquid. A polyurethane liquid will only exist if dissolved or if the polyurethane is thermoplastic and is heated to its melting point; applicants have not provided support for these permutations.

6. Claims 30-33, 36-39, and 43-47 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make

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and/or use the invention. Applicants have failed to provide enablement for the production of liquid polyurethanes. See paragraph 5 of this Office action.

7. Claims 48-50 and 52 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of golf ball covers using toluene diisocyanate, 4,4'-diphenylmethane diisocyanate, isophorone diisocyanate, or mixtures thereof, does not reasonably provide enablement for the production of golf ball covers using virtually any polyisocyanate. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Aside from the aforementioned polyisocyanates, applicants have provided no guidance for the selection of other suitable polyisocyanates.

8. Claims 44-46 and 48-52 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of golf ball covers using diethyl-2,4-toluenediamine and dimethylthio-2,4-toluenediamine, does not reasonably provide enablement for the production of golf ball covers using virtually any blend of differently reacting diamines. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification is devoid of guidance that would enable one to select suitable blends of differently reacting diamines that will yield suitable golf ball covers having viable processing characteristics. The only practical guidance provided by applicants stems from page 11 of the specification,

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wherein applicants state that the curing agents of the present invention are substantially Ethacure 300 and Ethacure 100.

9. Claims 30, 31, 33, 36-40, and 44-51 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of golf ball covers using polyoxytetramethylene polyol, does not reasonably provide enablement for the production of golf ball covers using virtually any ether glycol. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Applicants have failed to provide adequate teaching to permit one of ordinary skill in the art to produce viable golf ball covers using polyols other than the aforementioned polyoxytetramethylene polyol. The only guidance that applicants provide concerning the use of other polyols is a statement at page 14 that states that “unlike urethane elastomers made with other ether polyols, e.g., polypropylene ether glycol, urethane elastomers made with PTMEG exhibit superior dynamic properties such as coefficient of restitution and Bashore rebound”. Applicants further state that the polyol used in accordance with the present invention corresponds to a polyoxytetramethylene polyol. These statements in no way provide guidance for the use of other polyols.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 30-33, 36-41, and 43-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. ('852) or GB 2301291, each in view of Wu ('673) and Isaac ('568) and Presswood ('298).

The primary references disclose the production of thread wound-solid center golf balls, wherein the winding and center are comprised of components which are equivalent to those claimed by applicants. See columns 2-5 and tables within Kato et al. See pages 7-9 and examples within GB 2301291.

12. While the primary references are largely silent regarding the use of polyurethane covers, the use of such covers utilizing applicants' claimed prepolymer and blends of curing agents having different reactivities was known at the time of invention. Wu discloses the use of prepolymers based on diisocyanates and polytetramethylene ether glycol and a slow reacting polyamine, such as 3,5-dimethylthio toluene diamine. See columns 2. Isaac discloses the production of golf balls

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having polyurethane covers, wherein the polymerization cycle is interrupted through the use of blends of curing agents having different reactivities, so as to permit a center to be introduced into a semi-cured golf ball cover half which is then mated with the other half and cured. See abstract and columns 2 and 3. Furthermore, the claimed hardness values are considered to be inherent features of the polyurethane covers of these references, since it is logical to conclude that viable covers would have to possess comparable ranges of hardness in order to preform acceptably.

13. Though Isaac fails to disclose applicants' specific blend of fast and slow reacting diamines, the use of blends of diethyl toluene diamine with 3,5-dimethylthio toluene diamine to produce polyurethane molding compositions having controlled reaction profiles and improved properties was known at the time of invention. This position is supported by the teachings of Presswood at columns 2-4. Presswood further discloses the relative reactivities of the specified chain extenders.

14. Therefore, since it was known to employ blends of curing agents having different reactivities for the production of polyurethane golf ball covers and since it was known to employ diamines of the nature claimed by applicants to cure moldable prepolymers analogous to those claimed, it would have been obvious to one of ordinary skill in the art to utilize the curing agent blend of Presswood with the prepolymer of Wu in accordance with the teachings of Isaac, so as to obtain a golf ball cover composition suitable for use with the wound cores of the primary references.

15. Applicants have failed to argue how the claim amendments of August 23, 2002 patentably distinguish the instant claims from the prior art. Furthermore, it is noted that several of


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applicants' amendments pertain to the process of making the covers; however, it is unclear how the process limitations patentably distinguish the product. Within product-by-process claims, it must be shown that the process limitations cause a distinct product to result, in order for the process limitations to carry patentable weight.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.

R. Sergent

November 18, 2002



RABON SERGENT
PRIMARY EXAMINER